Use Attainability Analysis

for

WBID 253 Davis Creek Ditch

Submitted by
BWR

July 11, 2007

Submitted to:
Missouri Department of Natural Resources
Division of Environmental Quality
Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): DAVIS DITCH CREEK (DAVIS CREEK DITCH)
Missouri Water Body Identification (WBID) Number: 0253
8-digit HUC: ~~10240005~~ 10240005 County: HOLT
Upstream Legal Description (from Table H): 6,61N, 38W
Downstream Legal Description(from Table H): MOUTH
Number of sites evaluated 4
List all sites numbers, listed consequently upstream to downstream: 1, 2, 3, 4

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

II. Subegmentation (fill this section out only in cases where subesgmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Upstream Coordinates: UTM X Y		Downstream Coordinates: UTM X Y	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE		
GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP		

III. Discharger Facility Information (list all permitted dischargers on the stream)

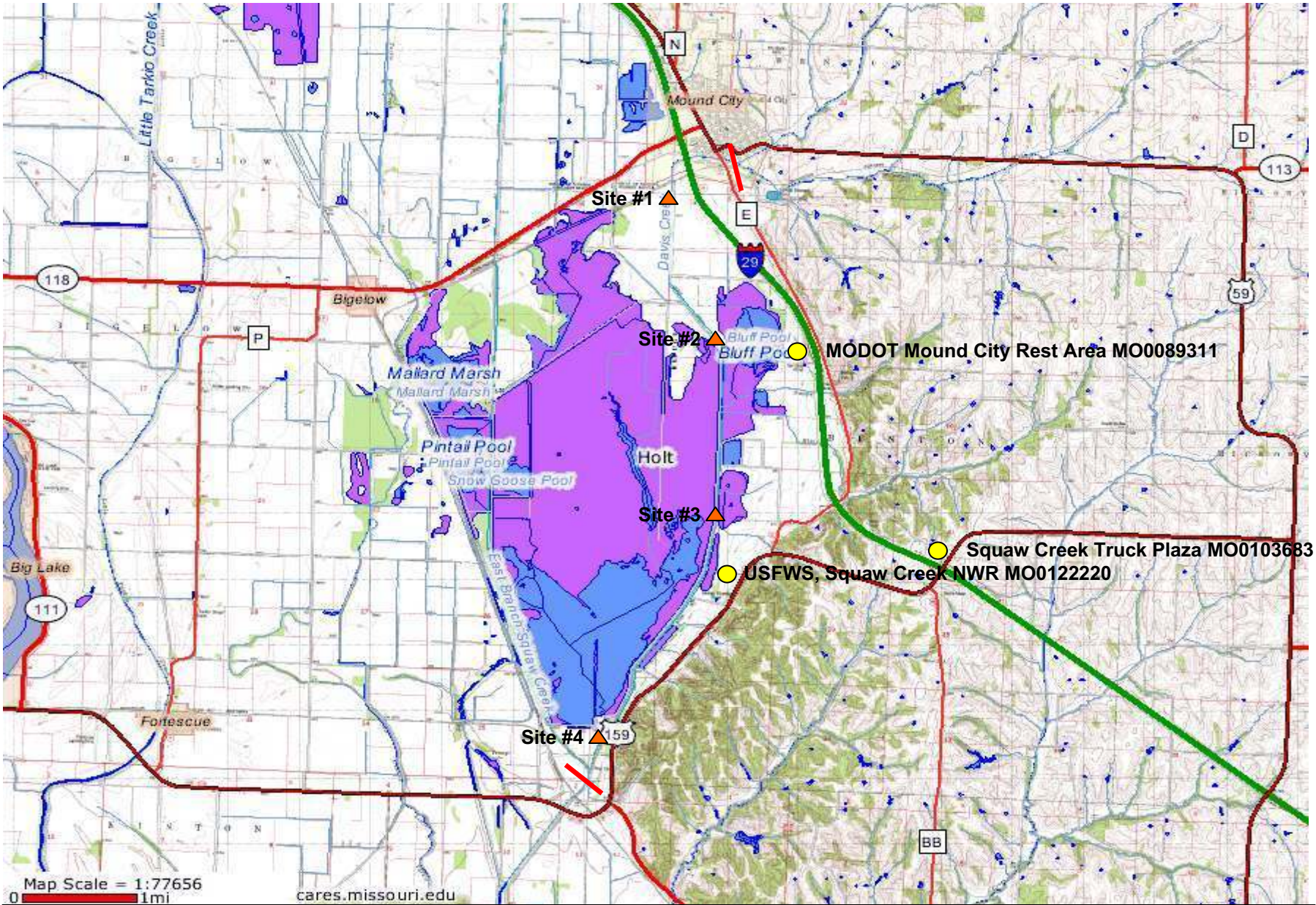
Discharger Facility Name(s): MODOT MOUND CITY REST AREA; SQUAW CREEK TRUCK PLAZA; USFWS, SQUAW CREEK NWR
Discharger Permit Number(s): MO0089311, MO0103683, MO0122220

IV. UAA Surveyor (please print legibly)

Name of Surveyor ALEX BARTLETT	Telephone Number: 816.363.2696
Organization/Employer: BWR CORP.	
Position: ENVIRONMENTAL SCIENTIST	

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Signed: _____ **Date:** 6/14/07



Davis Creek Ditch

WBID #253

WBID# 0253
Site# 1

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 6/14/07 0930	Site Location Description (e.g., road crossing): SERVICE RD. @ EAST OF KEYSTONE RD.
Personnel (Data Collectors): BARTLETT & LUNT	
Current Weather Conditions: CLEAR ~ 70°	Facility Name: MODOT MOUND CITY REST AREA; SQUAW CREEK TRUCK PLAZA; USFWS, SQUAW CREEK NWR
Weather Conditions for Past 10 days: FAIR	Permit Number: MO#089311, MO#103683, MO#122220

Drought Conditions?: No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)

Site GPS Coordinates: UTM X: 40.11975 Y: 095.23910

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP		

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
253-3,4	TRAN J-K	253-1,2	TRAN B-A		

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☒ Steep slopes	☐ None of the above	☒ Other:

Comments: CHANNELIZED DITCH.

Indications of Human Use*: (attach photos)

☒ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments: FARM ROAD BETWEEN 2 CORN FIELDS LEADS TO LEVEE

% CHANNEL FEATURES
RUN - 100
RIFFLE -
POOL -

*** Page Two – Data Sheet B for WBID # 253 : SITE #1**
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	20 % Sand	20 % Silt	60 % Mud/Clay	% Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

NONE OBSERVED

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other: BROWN, TURBID
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: _____ Date of Survey: 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 0253 Site # 1

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect A 1	wetted width	0.2			1 Channel Feature:	
2	3.0 m	0.3			2 RUN 100%	
3		0.3			3	
4	measurements	0.3			4 Dissolved Oxygen	
5	0.30 m	0.4			5	
6	apart	0.4			6 10.04 ppm	
7		0.4			7 — %	
8		0.3			8	
9		0.3			9	
10		0.3			10	
					11	
Transect B 1	wetted width	0.3			12 Channel Feature:	
2	2.8 m	0.4			13 RUN 100%	
3		0.4			14	
4	measurements	0.4			15 Dissolved Oxygen:	
5	0.28 m	0.4			16	
6	apart	0.4			17 9.99 ppm	
7		0.4			18 — %	
8		0.3			19	
9		0.3			20	
10		0.3			21	
					22	
Transect C 1	wetted width	0.5			23 Channel Feature:	
2	3.0 m	0.5			24 RUN	
3		0.6			25	
4	measurements	0.6			26 Dissolved Oxygen	
5	m	0.6			.	
6	apart	0.6			. 10.01 ppm	
7		0.6			. — %	
8		0.5			n	
9		0.4				
10		0.3				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. **Position:** ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 1

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect D 1	wetted width	0.4			1 Channel Feature:	
2	2.8 m	0.6			2 RUN 100%	
3		0.6			3	
4	measurements	0.6			4 Dissolved Oxygen	
5	0.28 m	0.6			5	
6	apart	0.6			6 9.89 ppm	
7		0.4			7 ____ %	
8		0.2			8	
9		0.2			9	
10		0.1			10	
					11	
Transect E 1	wetted width	0.1			12 Channel Feature:	
2	3.2 m	0.2			13 RUN	
3		0.3			14	
4	measurements	0.4			15 Dissolved Oxygen:	
5	0.32 m	0.7			16	
6	apart	0.6			17 9.98 ppm	
7		0.6			18 ____ %	
8		0.5			19	
9		0.3			20	
10		0.1			21	
					22	
Transect F 1	wetted width	0.2			23 Channel Feature:	
2	2.5 m	0.3			24 RUN	
3		0.4			25	
4	measurements	0.5			26 Dissolved Oxygen	
5	0.25 m	0.6			.	
6	apart	0.6			. 9.84 ppm	
7		0.6			. ____ %	
8		0.6			n	
9		0.6				
10		0.5				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

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Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 1

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect G 1	wetted width	0.2			1 Channel Feature:	
2	3.2 m	0.3			2 RUN	
3		0.4			3	
4	measurements	0.5			4 Dissolved Oxygen	
5	0.32 m	0.5			5	
6	apart	0.5			6 9.99 ppm	
7		0.5			7 ___ %	
8		0.6			8	
9		0.4			9	
10		0.2			10	
					11	
Transect H 1	wetted width	0.1			12 Channel Feature:	
2	3.0 m	0.3			13 RUN	
3		0.5			14	
4	measurements	0.5			15 Dissolved Oxygen:	
5	0.30 m	0.5			16	
6	apart	0.5			17 9.95 ppm	
7		0.4			18 ___ %	
9		0.4			19	
9		0.2			20	
10		0.1			21	
Transect I 1	wetted width	0.2			22	
2	3.4 m	0.2			23 Channel Feature:	
3		0.3			24 RUN	
4	measurements	0.5			25	
5	0.34 m	0.8			26 Dissolved Oxygen	
6	apart	0.8			.	
7		0.7			. 9.92 ppm	
8		0.6			. ___ %	
9		0.4			n	
10		0.3				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth i the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the twe depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 1

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect I	1	wetted width	0.7			1 Channel Feature:	
	2	2.6 m	0.6			2 RUN	
	3		0.5			3	
	4	measurements	0.6			4 Dissolved Oxygen	
	5	0.26 m	0.6			5	
	6	apart	0.5			6 9.79 ppm	
	7		0.5			7 ___ %	
	8		0.3			8	
	9		0.3			9	
	10		0.2			10	
						11	
Transect K	1	wetted width	0.2			12 Channel Feature:	
	2	3.0 m	0.2			13 RUN	
	3		0.3			14	
	4	measurements	0.5			15 Dissolved Oxygen:	
	5	0.30 m	0.6			16	
	6	apart	0.6			17 9.96 ppm	
	7		0.7			18 ___ %	
	9		0.5			19	
	9		0.5			20	
	10		0.3			21	
Transect	1	wetted width				22	
	2	___ m				23 Channel Feature:	
	3					24	
	4	measurements				25	
	5	___ m				26 Dissolved Oxygen	
	6	apart				.	
	7					. ___ ppm	
	8					. ___ %	
	9					n	
	10						

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: SWR. CORP. Position: ENV. SCI.

WBID# 0253
Site# 2

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 6/14/07 1100	Site Location Description (e.g., road crossing): N KOVINGTON RD. (SEE MAP & GPS)
Personnel (Data Collectors): BARTLETT & LUNT	
Current Weather Conditions: CLEAR ~ 80°	Facility Name: MODOT MOUND CITY REST AREA; SQUAW CREEK TRUC PLAZA; USFWS, SQUAW CREEK NWR
Weather Conditions for Past 10 days: FAIR	Permit Number: MO0089311, MO0103683, MO0122228
Drought Conditions?: No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)

Site GPS Coordinates: UTM X: 40.10272 Y: 095.22984

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP		

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
253;7-8	TRAN. 5-K	253;5-6	TRAN. 8-A		

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☒ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☐ None of the above	☐ Other:

Comments: SQUAW CREEK NWR

Indications of Human Use*: (attach photos)

☒ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments: KOVINGTON RD.

% CHANNEL FEATURES
RUN - 100
RIFFLE -
POOL -

*** Page Two – Data Sheet B for WBID #** 253 : SITE #2
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
		30	30	40	

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

NONE OBSERVED

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other: BROWN, TURBID
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: _____ Date of Survey: 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 2

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect A 1	wetted width	0.3			1 Channel Feature:	
2	3.2 m	0.5			2 RUN	
3		0.5			3	
4	measurements	0.5			4 Dissolved Oxygen	
5	0.32 m	0.4			5	
6	apart	0.4			6 10.04 ppm	
7		0.4			7 ____ %	
8		0.3			8	
9		0.1			9	
10		0.1			10	
					11	
Transect B 1	wetted width	0.1			12 Channel Feature:	
2	3.0 m	0.5			13 RUN	
3		0.5			14	
4	measurements	0.5			15 Dissolved Oxygen:	
5	0.30 m	0.5			16	
6	apart	0.5			17 9.97 ppm	
7		0.5			18 ____ %	
8		0.4			19	
9		0.2			20	
10		0.2			21	
					22	
Transect C 1	wetted width	0.1			23 Channel Feature:	
2	2.5 m	0.5			24 RUN	
3		0.4			25	
4	measurements	0.4			26 Dissolved Oxygen	
5	0.25 m	0.4			.	
6	apart	0.4			. 9.89 ppm	
7		0.4			. ____ %	
8		0.3			n	
9		0.2				
10		0.1				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 2

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect D	1	wetted width	0.1			1 Channel Feature:	
	2	2.5 m	0.3			2 RUN	
	3		0.4			3	
	4	measurements	0.5			4 Dissolved Oxygen	
	5	0.25 m	0.5			5	
	6	apart	0.4			6 9.97 ppm	
	7		0.4			7 — %	
	8		0.3			8	
	9		0.3			9	
	10		0.2			10	
						11	
Transect E	1	wetted width	0.2			12 Channel Feature:	
	2	2.0 m	0.4			13 RUN	
	3		0.5			14	
	4	measurements	0.5			15 Dissolved Oxygen:	
	5	0.20 m	0.5			16	
	6	apart	0.6			17 9.93 ppm	
	7		0.6			18 — %	
	8		0.5			19	
	9		0.4			20	
	10		0.2			21	
						22	
Transect F	1	wetted width	0.1			23 Channel Feature:	
	2	2.6 m	0.3			24 RUN	
	3		0.4			25	
	4	measurements	0.7			26 Dissolved Oxygen	
	5	0.26 m	0.6			.	
	6	apart	0.6			. 10.01 ppm	
	7		0.5			. — %	
	8		0.6			n	
	9		0.4				
	10		0.2				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: RWB CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 2

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect G 1	wetted width	0.1			1 Channel Feature:	
2	2.5 m	0.2			2 RUN	
3		0.3			3	
4	measurements	0.5			4 Dissolved Oxygen	
5	0.25 m	0.7			5	
6	apart	0.7			6 9.95 ppm	
7		0.6			7 — %	
8		0.6			8	
9		0.5			9	
10		0.2			10	
					11	
Transect H 1	wetted width	0.1			12 Channel Feature:	
2	3.0 m	0.4			13 RUN	
3		0.7			14	
4	measurements	0.7			15 Dissolved Oxygen:	
5	0.30 m	0.7			16	
6	apart	0.7			17 9.92 ppm	
7		0.7			18 — %	
8		0.4			19	
9		0.2			20	
10		0.1			21	
					22	
Transect I 1	wetted width	0.1			23 Channel Feature:	
2	3.0 m	0.3			24 RUN	
3		0.5			25	
4	measurements	0.6			26 Dissolved Oxygen	
5	0.30 m	0.7			.	
6	apart	0.7			. 9.89 ppm	
7		0.7			. — %	
8		0.6			n	
9		0.3				
10		0.1				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth i the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. **Position:** ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 Site # 2

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect I	1	wetted width	0.1			1 Channel Feature:	
	2	2.5 m	0.4			2 RUN	
	3		0.5			3	
	4	measurements	0.5			4 Dissolved Oxygen	
	5	0.25 m	0.5			5	
	6	apart	0.5			6 9.86 ppm	
	7		0.7			7 ___ %	
	8		0.7			8	
	9		0.4			9	
	10		0.2			10	
						11	
Transect K	1	wetted width	0.2			12 Channel Feature:	
	2	2.0 m	0.3			13 RUN	
	3		0.5			14	
	4	measurements	0.4			15 Dissolved Oxygen:	
	5	0.20 m	0.5			16	
	6	apart	0.0.5			17 9.93 ppm	
	7		0.4			18 ___ %	
	8		0.4			19	
	9		0.4			20	
	10		0.3			21	
Transect	1	wetted width				22	
	2	___ m				23 Channel Feature:	
	3					24	
	4	measurements				25	
	5	___ m				26 Dissolved Oxygen	
	6	apart				.	
	7					. ___ ppm	
	8					. ___ %	
	9					n	
	10						

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the tw depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR Corp. Position: Env. Sci.

WBID# 253
Site# 3

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 06/14/07 1145	Site Location Description (e.g., road crossing): ~~NEAR~~ NEXT TO KOUNGTON RD. (SEE MAP & GPS)
Personnel (Data Collectors): BARTLETT & LUNT	
Current Weather Conditions: CLEAR ~80°	Facility Name: MODOT MOUND CITY REST AREA; SQUAW CREEK TRUCK PLAZA; USFWS, SQUAW CREEK NWR
Weather Conditions for Past 10 days: FAIR	Permit Number: MO0089511, MO0103683, MO0122220
Drought Conditions?: No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)

Site GPS Coordinates: UTM X: 40.0813 Y: 095.2309

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP		

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
253-11,12	TRAN J-K	253-9,10	TRAN B-A		

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☒ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☐ None of the above	☒ Other:

Comments: SQUAW CREEK NWR

Indications of Human Use*: (attach photos)

☒ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments: KOUINGTON RD

% CHANNEL FEATURE:
RIFFLE: ____
RUN: 100
POOL: ____

*** Page Two – Data Sheet B for WBID # 253 :**
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	30 % Sand	40 % Silt	30 % Mud/Clay	% Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

NONE OBSTRUED

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other: Brown, Turbid
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: [signature] Date of Survey: 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 SITE # 3

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TA	1	WETTED WIDTH	0.2		1	CHANNEL	FEATURE:
	2	2.4 m	0.3		2	RUN	
	3		0.6		3		
	4	MEASUREMENTS	0.7		4	DISSOLVED	OXYGEN:
	5	0.24 m	0.7		5	9.82	PPM
	6	APART	0.6		6	____	%
	7		0.6		7		
	8		0.6		8		
	9		0.5		9		
	10		0.3		10		
					11		
TB	1	WETTED WIDTH	0.2		12	CHANNEL	FEATURE:
	2	3.0 m	0.4		13	RUN	
	3		0.5		14		
	4	MEASUREMENTS	0.5		15	DISSOLVED	OXYGEN:
	5	0.30 m	0.5		16		
	6	APART	0.5		17	9.76	PPM
	7		0.5		18		
	8		0.5		19	____	%
	9		0.5		20		
	10		0.3		21		
					22	CHANNEL	FEATURE:
TC	1	WETTED WIDTH	0.1		23	RUN	
	2	2.8 m	0.2		24		
	3		0.1		25	DISSOLVED	OXYGEN:
	4	MEASUREMENTS	0.5		26		
	5	0.28 m	0.6		.	9.72	PPM
	6	APART	0.5		.		
	7		0.5		.	____	%
	8		0.4		n		
	9		0.4				
	10		0.2				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: ENR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 253 SITE# 3

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TD	1	WETTED WIDTH	0.1			1 CHANNEL	FEATURE:
	2	3.0 M	0.3			2 RUN	
	3		0.5			3	
	4	MEASUREMENTS	0.6			4 DISSOLVED OXYGEN:	
	5	0.30 M	0.6			5 9.61	PPM
	6	APART	0.6			6	
	7		0.5			7 ____	%
	8		0.5			8	
	9		0.4			9	
	10		0.2			10	
						11	
TE	1	WETTED WIDTH	0.2			12 CHANNEL FEATURE:	
	2	3.2 M	0.5			13 RUN	
	3		0.6			14	
	4	MEASUREMENTS	0.6			15 DISSOLVED OXYGEN:	
	5	0.32 M	0.6			16 9.71	PPM
	6	APART	0.6			17	
	7		0.6			18 ____	%
	8		0.6			19	
	9		0.4			20	
	10		0.1			21	
						22	
TF	1	WETTED WIDTH	0.1			23 CHANNEL FEATURE:	
	2	1.0 M	0.3			24 RUN	
	3		0.5			25	
	4	MEASUREMENTS	0.6			26 DISSOLVED OXYGEN:	
	5	0.20 M	0.6			. 9.81	PPM
	6	APART	0.6			.	
	7		0.6			. ____	%
	8		0.6			n	
	9		0.3				
	10		0.1				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: RWA CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 253 SITE# 3

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TG	1	WETTED WIDTH	0.1			1 CHANNEL FEATURE:	
	2	2.6 m	0.3			2 RUN	
	3		0.4			3	
	4	MEASUREMENTS	0.4			4 DISSOLVED OXYGEN:	
	5	0.76 m	0.4			5	
	6	APART	0.4			6 9.64	PPM
	7		0.4			7	
	8		0.5			8	%
	9		0.3			9	
	10		0.2			10	
						11	
TH	1	WETTED WIDTH	0.1			12 CHANNEL	FEATURE:
	2	3.0 m	0.3			13 RUN	
	3		0.5			14	
	4	MEASUREMENTS	0.6			15 DISSOLVED OXYGEN:	
	5	m	0.6			16	
	6	APART	0.6			17 9.60	PPM
	7		0.6			18	
	8		0.5			19	%
	9		0.2			20	
	10		0.2			21	
						22	
TI	1	WETTED WIDTH	0.1			23 CHANNEL	FEATURE:
	2	2.8 m	0.3			24 RUN	
	3		0.5			25	
	4	MEASUREMENTS	0.5			26 DISSOLVED OXYGEN:	
	5	0.79 m	0.5			.	
	6	APART	0.5			. 9.74	PPM
	7		0.5			.	
	8		0.5			n	%
	9		0.4				
	10		0.1				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 253 SITE# 3

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TJ 1	WETTED WIDTH	0.1			1 CHANNEL	FEATURE :
2	2.5 M	0.5			2 RUN	
3		0.5			3	
4	MEASUREMENTS	0.5			4 DISSOLVED	OXYGEN:
5	0.25 M	0.5			5 9.69	PPM
6	APART	0.5			6	
7		0.5			7 ____	%
8		0.5			8	
9		0.4			9	
10		0.2			10	
					11	
TK 1	WETTED WIDTH	0.2			12 CHANNEL	FEATURE :
2	2.0 M	0.5			13 RUN	
3		0.6			14	
4	MEASUREMENTS	0.6			15 DISSOLVED	OXYGEN:
5	0.20 M	0.5			16	
6	APART	0.6			17 9.73	PPM
7		0.7			18	
8		0.6			19 ____	%
9		0.5			20	
10		0.2			21	
					22	
					23	
					24	
					25	
					26	
					.	
					.	
					.	
					n	

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: EWR CORP. Position: ENV. SCI.

WBID# 0253
Site# 4

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 6/14/0	Site Location Description (e.g., road crossing): NEXT TO KOUNGTON RD. - SOUTH (SEE MAP & GPS)
Personnel (Data Collectors): BARTLETT & LUNT	
Current Weather Conditions: CLEAR ~80°	Facility Name: MODOT MOUND CITY REST AREA; SQUAW CREEK TRUCK PLAZA; USFWS, SQUAW CREEK NWR
Weather Conditions for Past 10 days: FAIR	Permit Number: MO0089311, MO0103683, MO0122220
Drought Conditions?: No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)

Site GPS Coordinates: UTM X: 40.05026 Y: 095.24783

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE:

GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP		

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
253; 15, 16	TRAN J-K	253 - 13, 14	TRAN B-A		

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☒ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☐ None of the above	☒ Other:

Comments: SQUAW CREEK NWR

Indications of Human Use*: (attach photos)

☒ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments: KOUNGTON RD.

% CHANNEL FEATURE:
RIFFLE: ____
RUN: 100
POOL: ____

*** Page Two – Data Sheet B for WBID # 253 :** SITE #4
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	30% Sand	50 % Silt	20 % Mud/Clay	% Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

NONE OBSERVED

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other: BROWN, TURBID
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: _____ Date of Survey: 6/14/07

Organization: JWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 253 SITE # 4

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TA	1	WETTED WIDTH	0.5		1	CHANNEL	FEATURE:
	2	3.0 m	0.6		2	RUN	
	3		0.6		3		
	4	MEASUREMENTS	0.6		4	DISSOLVED	OXYGEN:
	5	0.30 m	0.6		5	9.29	PPM
	6	APART	0.6		6	____	%
	7		0.5		7		
	8		0.6		8		
	9		0.5		9		
	10		0.4		10		
					11		
TB	1	WETTED WIDTH	0.1		12	CHANNEL	FEATURE:
	2	3.2 m	0.7		13	RUN	
	3		0.6		14		
	4	MEASUREMENTS	0.6		15	DISSOLVED	OXYGEN:
	5	0.32 m	0.6		16		
	6	APART	0.6		17	9.35	PPM
	7		0.4		18		
	8		0.2		19	____	%
	9		0.2		20		
	10		0.1		21		
					22	CHANNEL	FEATURE:
TC	1	WETTED WIDTH	0.1		23	RUN	
	2	3.0 m	0.5		24		
	3		0.5		25	DISSOLVED	OXYGEN:
	4	MEASUREMENTS	0.5		26		
	5	0.30 m	0.6		.	9.24	PPM
	6	APART	0.5		.		
	7		0.4		.	____	%
	8		0.4		n		
	9		0.3				
	10		0.2				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: RWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 753 SITE# 4

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TD	1	WETTED WIDTH	0.2		1	CHANNEL	FEATURE:
	2	4.0 M	0.6		2	RUN	
	3		0.5		3		
	4	MEASUREMENTS	0.7		4	DISSOLVED OXYGEN:	
	5	0.40 M	0.7		5	9.10	PPM
	6	APART	0.6		6		
	7		0.6		7		%
	8		0.5		8		
	9		0.4		9		
	10		0.3		10		
					11		
TE	1	WETTED WIDTH	0.3		12	CHANNEL	FEATURE:
	2	3.5 M	0.5		13	RUN	
	3		0.5		14		
	4	MEASUREMENTS	0.6		15	DISSOLVED OXYGEN:	
	5	0.35 M	0.7		16	9.34	PPM
	6	APART	0.7		17		
	7		0.6		18		%
	8		0.4		19		
	9		0.3		20		
	10		0.2		21		
					22		
TF	1	WETTED WIDTH	0.2		23	CHANNEL	FEATURE:
	2	3.8 M	0.5		24	RUN	
	3		0.6		25		
	4	MEASUREMENTS	0.6		26	DISSOLVED OXYGEN:	
	5	0.38 M	0.7		.	9.36	PPM
	6	APART	0.7		.		
	7		0.6		.		%
	8		0.6		n		
	9		0.4				
	10		0.3				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 253 SITE# 4

		Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TG	1	WETTED WIDTH	0.2		1	CHANNEL FEATURE:	
	2	4.0 m	0.7		2	RUN	
	3		0.6		3		
	4	MEASUREMENTS	0.6		4	DISSOLVED OXYGEN:	
	5	0.40 m	0.5		5		
	6	APART	0.5		6	9.37 PPM	
	7		0.6		7		
	8		0.4		8	%	
	9		0.2		9		
	10		0.2		10		
					11		
TH	1	WETTED WIDTH	0.3		12	CHANNEL FEATURE:	
	2	3.5 m	0.6		13	RUN	
	3		0.7		14		
	4	MEASUREMENTS	0.6		15	DISSOLVED OXYGEN:	
	5	0.35 m	0.6		16		
	6	APART	0.5		17	9.31 PPM	
	7		0.5		18		
	8		0.5		19	%	
	9		0.4		20		
	10		0.4		21		
					22		
TI	1	WETTED WIDTH	0.4		23	CHANNEL FEATURE:	
	2	4.2 m	0.6		24	RUN	
	3		0.6		25		
	4	MEASUREMENTS	0.6		26	DISSOLVED OXYGEN:	
	5	0.42 m	0.5		.		
	6	APART	0.5		.	9.18 PPM	
	7		0.5		.		
	8		0.5		n	%	
	9		0.4				
	10		0.3				

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID# 253 SITE# 4

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
TJ 1	WETTED WIDTH	0.4			1 CHANNEL	FEATURE :
2	4.5 M	0.6			2 RUN	
3		0.6			3	
4	MEASUREMENTS	0.6			4 DISSOLVED	OXYGEN:
5	0.45 M	0.6			5 9.42	PPM
6	APART	0.6			6	
7		0.5			7 ____	%
8		0.4			8	
9		0.2			9	
10		0.2			10	
					11	
TK 1	WETTED WIDTH	0.4			12 CHANNEL	FEATURE :
2	3.0 M	0.4			13 RUN	
3		0.3			14	
4	MEASUREMENTS	<0.1			15 DISSOLVED	OXYGEN:
5	0.30 M	<0.1			16	
6	APART	0.5			17 9.41	PPM
7		0.6			18	
8		0.6			19 ____	%
9		0.4			20	
10		0.3			21	
					22	
					23	
					24	
					25	
					26	
					.	
					.	
					.	
					n	

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _____ **Date:** 6/14/07

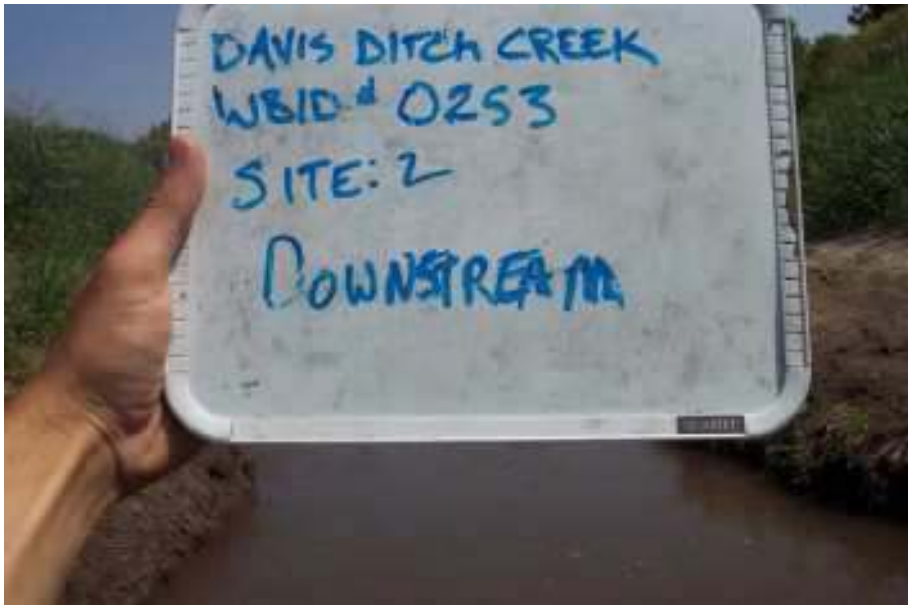
Organization: BWR CORP. Position: ENV. SCI.

Downstream (Site 1) of Davis Creek Ditch

Downstream (Site 1) of Davis Creek Ditch

Upstream (Site 1) of Davis Creek Ditch

Upstream (Site 1) of Davis Creek Ditch



Downstream (Site 2) of Davis Creek Ditch

Downstream (Site 2) of Davis Creek Ditch

Upstream (Site 2) of Davis Creek Ditch

Upstream (Site 2) of Davis Creek Ditch

Downstream (Site 3) of Davis Creek Ditch

Downstream (Site 3) of Davis Creek Ditch

Upstream (Site 3) of Davis Creek Ditch

Upstream (Site 3) of Davis Creek Ditch

Downstream (Site 4) of Davis Creek Ditch

Downstream (Site 4) of Davis Creek Ditch

Upstream (Site 4) of Davis Creek Ditch

Upstream (Site 4) of Davis Creek Ditch